



## M 6.6, 9km NE of Columbio, Philippines

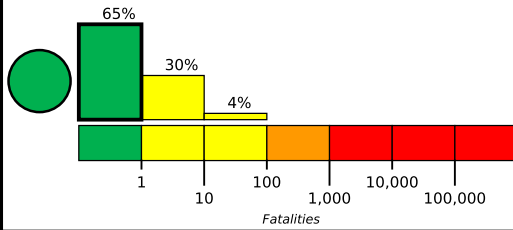
Origin Time: 2019-10-29 01:04:43 UTC (Tue 09:04:43 local)

Location: 6.7587° N 124.9952° E Depth: 14.9 km

FOR TSUNAMI INFORMATION, SEE: [tsunami.gov](https://tsunami.gov)

Created: 3 weeks, 6 days after earthquake

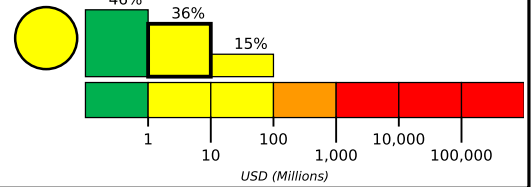
### Estimated Fatalities



Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of Philippines. Past events with this alert level have required a local or regional level response.

Green alert for shaking-related fatalities. There is a low likelihood of casualties.

### Estimated Economic Losses

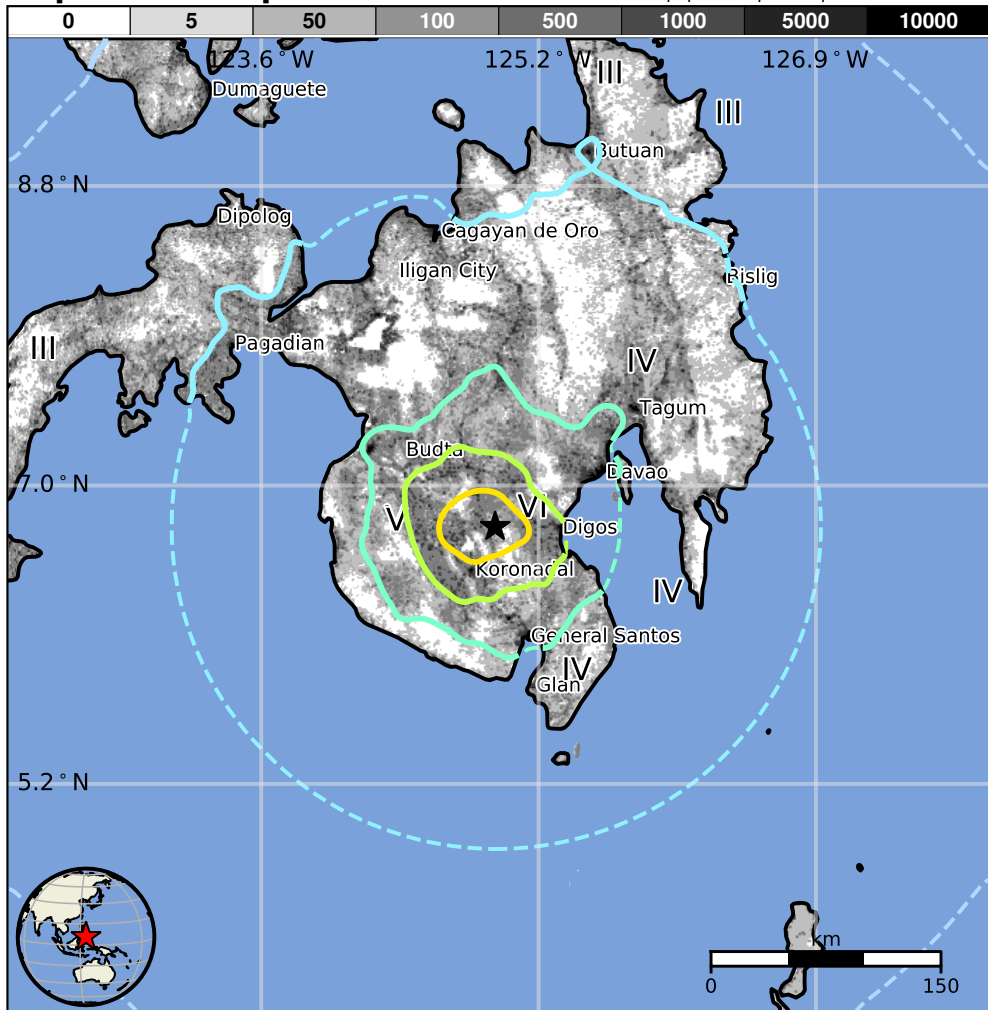


### Estimated Population Exposed to Earthquake Shaking

| ESTIMATED POPULATION EXPOSURE (k=x1000) |                       | —*       | 4,942k* | 10,869k | 5,363k   | 2,452k   | 659k        | 0          | 0        | 0        |
|---|-----------------------|----------|---------|---------|----------|----------|-------------|------------|----------|----------|
| ESTIMATED MODIFIED MERCALLI INTENSITY   |                       | I        | II-III  | IV      | V        | VI       | VII         | VIII       | IX       | X+       |
| PERCEIVED SHAKING                       |                       | Not felt | Weak    | Light   | Moderate | Strong   | Very Strong | Severe     | Violent  | Extreme  |
| POTENTIAL DAMAGE                        | Resistant Structures  | None     | None    | None    | V. Light | Light    | Moderate    | Mod./Heavy | Heavy    | V. Heavy |
|   | Vulnerable Structures | None     | None    | None    | Light    | Moderate | Mod./Heavy  | Heavy      | V. Heavy | V. Heavy |

\*Estimated exposure only includes population within the map area.

### Population Exposure



### Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are reinforced concrete and unknown/miscellaneous types construction.

### Historical Earthquakes

| Date (UTC) | Dist. (km) | Mag. | Max MMI(#) | Shaking Deaths |
|------------|------------|------|------------|----------------|
| 1987-05-23 | 150        | 5.7  | VII(70k)   | 1              |
| 1990-02-08 | 336        | 6.7  | VIII(96k)  | 1              |
| 2002-03-05 | 119        | 7.5  | VIII(12k)  | 15             |

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

### Selected City Exposure

from GeoNames.org

| MMI | City           | Population |
|-----|----------------|------------|
| VII | Digal          | 7k         |
| VII | Buluan         | 28k        |
| VII | Bual           | 5k         |
| VII | Columbio       | 6k         |
| VII | Damawato       | 2k         |
| VII | Datu Paglas    | 4k         |
| V   | Davao          | 1,213k     |
| V   | Cotabato       | 179k       |
| IV  | Cagayan de Oro | 445k       |
| IV  | Butuan         | 310k       |
| IV  | Pagadian       | 187k       |

PAGER content is automatically generated, and only considers losses due to structural damage.

Limitations of input data, shaking estimates, and loss models may add uncertainty.

<https://earthquake.usgs.gov/earthquakes/eventpage/us6000645n#pager>

bold cities appear on map.

(k = x1000)

Event ID: us6000645n